AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method of forming an addressable array of chemical moieties on a substrate, comprising:

(a) for each ~~of multiple locations~~ feature location of said addressable array on the substrate, depositing a reagent drop set during a cycle so as to attach a corresponding moiety for that feature location; and

(b) repeating step (a) if required, until the addressable array is formed;

wherein, for each ~~of multiple~~ feature location [[~~s~~]] of said addressable array, a multi-dispenser drop group is deposited onto said feature location, wherein said multi-dispenser drop ~~over one or more cycles of (a) and (b) for a corresponding location which group~~ includes drops which are deposited from different dispensers;

the method additionally comprising:

(c) depositing and detecting drops of said ~~reagent drop set~~ multi-dispenser drop group from said different dispensers at respective separate test locations on the substrate, wherein each of said separate test locations does not include a previously deposited drop ~~from different dispensers which deposit a multi-dispenser drop group~~ comprising ~~said reagent drop set~~.

2. (CURRENTLY AMENDED) A method according to claim 1 wherein drops of the multi-dispenser drop group in step (c) are not independently detected at the corresponding feature location in step (b).

3. (CURRENTLY AMENDED) A method according to claim 1 wherein a multi-dispenser drop group comprises a drop including an attachment moiety which becomes attached at the feature location at which the drop is deposited in step (a) or (b) but which does not become attached at a test location in step (c).

4. (CURRENTLY AMENDED) A method according to claim 1 wherein a multi-dispenser drop group comprises a drop including an attachment moiety which will become attached at the feature location at which the drop is deposited upon activation by an activator, and at least one other drop comprises the activator moiety, such that the attachment moiety and activator are deposited at separate test locations

in step (c).

5. (CURRENTLY AMENDED) A method according to claim 1 wherein in (c) drops are deposited and detected at respective separate test locations on the substrate from all those dispensers which deposit a multi-dispenser drop group.

6. (CURRENTLY AMENDED) A method according to claim 2 wherein in step (c) the drops are detected on the separate test locations on the substrate.

7. (ORIGINAL) A method according to claim 1 additionally comprising capturing an image of drops deposited during step (c).

8. (ORIGINAL) A method according to claim 6 additionally comprising evaluating results from the detecting for an indication of a dispenser error and, when an error is detected, discarding the array or depositing further drops to correct the error.

9. (ORIGINAL) A method according to claim 6 additionally comprising saving results from the detecting in a memory.

10. (ORIGINAL) A method according to claim 6 additionally comprising evaluating results from the detecting based at least in part on a cycle during which the results were obtained.

11. (ORIGINAL) A method according to claim 10 wherein results from detecting during multiple cycles are obtained and the evaluation is based at least in part on the cycles during which the results were obtained.

12. (ORIGINAL) A method according to claim 2 additionally comprising adjusting a parameter of the dispensing in step (a) based at least in part on the results from step (c).

13. (CURRENTLY AMENDED) A method according to claim 1 wherein in step (c) replicates of a same drop from a same dispenser are deposited at multiple different test locations on the substrate, the method additionally comprising evaluating a characteristic of the substrate based on the results of detecting the replicates.

14. (ORIGINAL) A method according to claim 1 additionally comprising evaluating dispenser performance based on relative characteristics of drops of different composition deposited from different dispensers.

15. (CURRENTLY AMENDED) A method according to claim 1 wherein during step (a) or (b) drops of multi-dispenser drop groups are deposited at respective substrate locations such that one drop of the group contacts a previously deposited drop of the same group at the same feature location.

16. (ORIGINAL) A method according to claim 2 wherein different multi-dispenser drop groups have at least one drop deposited by a same dispenser and another drop deposited by a different dispenser.

17. (PREVIOUSLY PRESENTED) A method according to claim 2 wherein the at least some of the drops of a multi-dispenser drop group are of a different composition.

18. (ORIGINAL) A method according to claim 2 wherein at least one of the drops of different multi-dispenser drop groups are deposited from a same dispenser.

19. (CURRENTLY AMENDED) A method according to claim 1 wherein different multi-dispenser drop groups are deposited at respective substrate feature locations in step (a) or (b), and wherein the drops deposited and detected in step (c) are deposited in a test pattern area of said substrate separate from the array.

20. (CURRENTLY AMENDED) A method of forming an addressable array of chemical moieties on a substrate, comprising:

(a) for each ~~of multiple locations~~ feature location of said addressable array on the substrate, depositing a reagent drop set during a cycle so as to attach a corresponding moiety for that feature location; and

(b) repeating step (a) if required, until the addressable array is formed;

wherein, for each ~~of multiple~~ feature location ~~[[s]]~~ of said addressable array, a multi-dispenser drop group is deposited onto said feature location, wherein said multi-dispenser drop ~~over one or more cycles of (a) and (b) for a corresponding location which group~~ includes drops which are deposited from different dispensers;

the method additionally comprising:

(c) depositing and detecting drops of said ~~reagent drop set~~ muti-dispenser drop group from said different dispensers ~~which deposit a multi-dispenser drop group comprising said reagent drop set,~~ onto the substrate at respective separate test locations in a test pattern area separate from the array, wherein each of said separate test locations does not include a previously deposited drop.

21. (CURRENTLY AMENDED) A method according to claim 20 wherein a multi-dispenser drop group comprises a drop including an attachment moiety which becomes attached at the feature location at which the drop is deposited in step (a) or (b) but which does not become attached at a test location in step (c).

22. (CURRENTLY AMENDED) A method according to claim 20 wherein a multi-dispenser drop group comprises a drop containing an attachment moiety which will become attached at that feature location upon activation by an activator, and at least one other drop containing the activator moiety, such that the attachment moiety and activator are deposited at separate test locations in step (c).

23. (CURRENTLY AMENDED) A method according to claim 22 wherein in step (c) no activator containing drop is deposited at a same test location as an attachment moiety containing drop.

24. (CURRENTLY AMENDED) A method according to claim 22 wherein different multi-dispenser drop groups are deposited at respective substrate feature

locations in step (a) or (b), and wherein drops from dispensers which deposit different multi-dispenser drop groups are deposited and detected in step (c) in a test pattern area separate from the array.

25. (CURRENTLY AMENDED) A method of forming an addressable array of polymers on a substrate, comprising:

(a) for each ~~of multiple locations~~ feature location of said addressable array on the substrate, depositing a reagent drop set during a cycle so as to attach a monomeric unit of the corresponding polymer for that feature location; and

(b) repeating step (a), until the addressable array is formed;

wherein, for each ~~of multiple~~ feature location [[~~s~~]] of said addressable array, a multi-dispenser drop group is deposited onto said feature location, wherein said multi-dispenser drop group ~~over one or more cycles of (a) and (b) for a corresponding location which group~~ includes drops which are deposited from different dispensers;

the method additionally comprising:

(c) depositing and detecting drops of said ~~reagent drop set~~ multi-dispenser drop group from said different dispenser at respective separate test locations on the substrate, wherein each of said separate test locations does not include a previously deposited drop ~~from different dispensers which deposit a multi-dispenser drop group comprising said reagent drop set~~.

26. (CURRENTLY AMENDED) A method according to claim 25 wherein a multi-dispenser drop group comprises a drop including an attachment moiety which becomes attached at the feature location at which the drop is deposited in step (a) or (b) but which does not become attached at a test location in step (c).

27. (ORIGINAL) A method according to claim 25 wherein the polymers are biopolymers.

28. (CURRENTLY AMENDED) A method according to claim 27 wherein a multi-dispenser drop group deposited during a cycle comprises a drop including the monomeric unit which will become attached at that feature location upon activation

by an activator, and at least one other drop comprises the activator moiety, such that the monomeric unit and activator are deposited at separate test locations in step (c).

29. (ORIGINAL) A method according to claim 25 wherein step (c) is performed between two cycles.

30. (ORIGINAL) A method according to claim 25 wherein step (c) is performed between two cycles, and performed again between another two cycles.

31. (CURRENTLY AMENDED) A method according to claim 25 wherein drops are deposited and detected at respective separate test locations on the substrate from all those dispensers which deposit a multi-dispenser drop group.

32. (ORIGINAL) A method according to claim 25 wherein in step (c) the drops are detected on the substrate.

33. (ORIGINAL) A method according to claim 25 additionally comprising capturing an image of drops deposited during step (c).

34. (ORIGINAL) A method according to claim 28 wherein step (c) is performed between two cycles, the method additionally comprising when an error in a monomeric unit or activator drop dispenser is detected then depositing further drops containing the monomeric unit or activator so as to correct the error.

35. (CURRENTLY AMENDED) A method according to claim 26 wherein during step (a) or (b) drops of multi-dispenser drop groups are deposited at respective substrate feature locations such that one drop of the group contacts a previously deposited drop of the same group at the same feature location.

36. (CURRENTLY AMENDED) A method according to claim 28 wherein the activator containing drop for multiple feature locations is deposited from a same dispenser.

37. (CURRENTLY AMENDED) A method according to claim 25 wherein different multi-dispenser drop groups are deposited at respective substrate feature locations in step (a) or (b), and wherein the drops deposited and detected in step (c) are deposited in a test pattern area separate from the array.

38. (CURRENTLY AMENDED) A method of forming multiple addressable arrays of chemical moieties on a substrate, comprising for each array:

(a) for each of multiple feature locations on the substrate, depositing a reagent drop set during a cycle so as to attach a corresponding moiety for that feature location; and

(b) repeating step (a) if required, until the addressable array is formed;

wherein multiple dispensers are used over one or more cycles of (a) and (b) to dispense drops to form the array, the method additionally comprising:

(c) depositing and detecting drops of said reagent drop set from the different dispensers at respective separate test locations on the substrate, wherein the drops are deposited at a separate test pattern area between arrays with the number of test locations of the test pattern area during any one cycle being less than one tenth the number of feature locations in the smallest of the arrays which the test pattern area is between.

39. (CURRENTLY AMENDED) A method according to claim 38 wherein the number of test locations of the test pattern area during any one cycle is not greater than ten times the number of the dispensers used to form an array during any one cycle.

Claims 40-58 (Canceled).